DOCUMENT RESUME

ED 236 888 EC 161 109

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TITLE Assessment of Cognitive Social Skills in Learning Disabled Boys.
PUB DATE Aug 83
NOTE 17p.; Paper presented at the Annual Convention of the American Psychological Association (91st, Anaheim, CA, August 26-30, 1983).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Behavior Problems; *Interpersonal Competence; Junior High Schools; *Learning Disabilities; *Problem Solving; Social Development

ABSTRACT

Cognitive social skills were assessed in 22 learning disabled (LD), 18 behavior problem, and 20 control boys in grades 7-9. Measures included an interview tapping social knowledge, self-reported behavior, generation of alternative solutions to social problems, and the Wechsler Intelligence Scale for Children-Revised Vocabulary Scale. Sociometric ratings were obtained for the LD and control groups and a subsample of the behavior problem Ss. LD and behavior problem Ss received significantly lower ratings on the sociometric measure than did controls. They also proposed alternative solutions to assertion-related social problems which were significantly lower quality than controls. Scores correlated significantly with sociometric ratings but not with vocabulary scores. Behavior problem Ss proposed alternate solutions to aggression-related situations which were of significantly lower quality than controls. Difficulties in social problem solving skills appear to be situation-specific and may not be simply a function of verbal intelligence. (Author/CL)

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Assessment of Cognitive Social Skills in Learning Disabled Boys

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Paper presented at the Ninety-first Annual Convention of the American Psychological Association, Anaheim, California, August 27, 1983.

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Abstract

Cognitive social skills were assessed in 22 learning disabled, 18 behavior problem and 20 control boys in grades 7-9. Measures included an interview tapping social knowledge, self-reported behavior, and generation of alternative solutions to social problems, and the WISC-R vocabulary scale. Sociometric ratings were obtained for the LD and control groups, and a subsample of the behavior problem subjects. Learning disabled and behavior problem subjects received significantly lower ratings on the sociometric measure than did controls. They also proposed alternative solutions to assertion-related social problems which were significantly lower quality than controls. These scores correlated significantly with sociometric ratings, but not with vocabulary scores. Behavior problem boys proposed alternate solutions to aggression-related situations which were of significantly lower quality than controls. The implications of the study's findings for further research, and for the design of interventions to enhance outcomes of mainstreaming are discussed.

Assessment of Cognitive Social Skills

in Learning Disabled Boys

The mainstreaming of educationally handicapped children has often met with failure due to social as well as academic problems (Gresham, 1981). Learning disabled (LD) students are generally less socially accepted than are their nonhandicapped peers (Bryan, 1978; Gresham, 1981), but the factors responsible for this have yet to be identified. The lower social status of LD students may be due to a number of factors, including the effects of labeling. However, it has been reported that LD children receive lower global ratings of social skill even under blind rating conditions (Bryan, 1978). Consequently, much research has focused on the assessment of social skill deficits in this group. Despite this, little consistency has been found among studies in identifying deficits in overt social behavior which discriminate LD from other children (Bryan, 1978; La Greca, 1981).

In light of such findings, the role of cognitive skills in the production of children's social behavior is receiving increasing attention. Popular and unpopular children have been found to differ on measures of knowledge of appropriate social behavior, and ability to generate effective alternatives to social problems (Asher, Renshaw, Geraci & Dor, 1979). Research suggests that LD children exhibit deficits in social cognitive skills (Bryan, 1978; Bryan, Sonnefeld & Greenburg, 1981), but their nature and relation to peer acceptance remain unclear. Such data are needed to determine effective intervention strategies for the social problems of LD

students. The present study assessed social knowledge, generation of solutions to problems, and self-reported behavior in LD, behavior problem and control subjects. The relationship of these measures to sociometric status was also examined for the LD and control subjects.

Method

Subjects

Subjects were 60 males in grades 7 to 9 in a public school system in the state of Washington. Twenty-two subjects had been classified as learning disabled according to state guidelines which follow the definition of learning disabilities incorporated in Public Law 94-142. In brief, these guidelines define learning disability as a disorder of language-related information processing not attributable to peripheral deficits, retardation, emotional disturbance or environmental factors. Subjects in this group had been evaluated by a multidisciplinary team and given standardized psychological and educational tests to qualify for placement. All were attending a resource room but were mainstreamed for some classes. Twenty control subjects were recruited from among regular education students in classes where the LD subjects were also enrolled. Only students who did not meet criteria for the other groups were considered for inclusion. Also, any student identified by school staff as being a potential focus of concern for special education, or having other significant physical, academic or behavior problems were also excluded. Permission letters were sent to the parents of the remaining students, and the first twenty for whom consent was obtained formed the control group. Eighteen subjects were identified as demonstrating

significant behavior problems in the school setting. Criteria for inclusion in this group were 1) nomination by the school counselors or vice-principal, and independent corroboration by another of these staff members, that the student had significant conduct problems at school; 2) five or more detentions or one suspension by the end of the first school semester; and 3) not classified, or considered a "focus of concern" for classification as learning disabled. This group was included to act as a control for poor school adjustment without the identified cognitive problems of the LD group. No significant differences were found among groups in age or distribution by grade. The mean age of the total sample was 13 years, 9 months. Written parental consent was obtained for participation of all subjects.

Dependent Measures

1) A roster and rating sociometric scale was administered in classrooms where LD and control subjects had been enrolled together for at least three months. Students were asked to rate class members on two 5-point Likert scales, indicating their desire to play and work with each one. While four behavior problem students were also enrolled in these classes and were included in the sociometric, the remainder were scattered among many different classrooms and thus could not be included in this measure.

2) A structured interview was designed to assess social cognitive skills. Eight simple scenarios, selected from pilot research, were constructed concerning typical social problem situations at school. Half involved situations dealing with aggression (e.g., being teased or physically harassed by another student), and half with assertion situations (e.g., refusing a

friend's request to borrow money). Each was read to the subject as he followed along on a large printed card. The situation was then reviewed with the subject to insure it was understood and that he had no questions. He was then asked 1) for his most likely behavior in the situation ("What would you do if this happened to you?"); 2) to generate an alternate solution to the problem ("If you couldn't do that, what would you do instead?"); and 3) to say what the most appropriate way of handling it would be ("What is the best thing to do?"). Responses were recorded verbatim, and scored as follows.

All subjects' responses were grouped by the first author into categories based on content (e.g., making requests, appealing to an adult, using physical aggression). Another rater blind to subjects' group status classified the responses of half the subjects, selected randomly, into these categories. Interrater agreement in classifying responses into categories was 94%. Following this, 21 professionals who work with children (e.g., teachers, psychologists, school counselors, principals and vice-principals) rated the appropriateness of each category as a solution to the problem situations on a 5-point Likert scale. The consistency with which they rated solutions on this scale was quite high (Cronbach's $\alpha = .98$, $p < .001$). The mean of their ratings was used as an overall skill score for each response category. Each student received a skill rating for his first, alternate and best response to each situation. Means of these scores were calculated separately for the assertion and aggression-related situations. In addition, 52 8th graders in regular education classes in the same schools

provided similar ratings of the skill categories, judging the appropriateness of each on the same 5-point Likert scale. The consistency with which students rated these solutions was also very high (Cronbach's $\alpha = .98$, $p < .001$). The mean of the student ratings provided a separate skill score for each category based on peer, rather than adult, standards. Means of these ratings were computed for each subject for his first, alternate and best responses just as for the adult ratings, and were analyzed similarly. The Pearson correlation between the adult and student skill ratings was highly significant ($r = .91$, $p < .001$).

3) The WISC-R vocabulary scale was used to obtain an estimate of current verbal intelligence. It was administered and scored according to the standard procedure in the test manual.

Procedure

Once parental consent was obtained, the sociometric questionnaire was administered in classrooms by the teachers. As part of a larger assessment study of social skills, each subject was given an individual assessment in which the interview and vocabulary scale were administered by either the first author or a trained research assistant.

Results

One-way analyses of variance of the interview and vocabulary measures indicated no significant effects due to different experimenters. The means and standard deviations of the dependent measures for each group are presented in Table 1.

Insert Table 1 about here

Previous research (Asher & Hymel, 1981) had found strong biases against opposite-sex peers on sociometric ratings; also, the primary focus of this study concerned acceptance of learning disabled students by their mainstream peers. Therefore, sociometric scores were computed as the mean rating given each subject by male regular education students. The LD subjects and the small group of behavior problem subjects were rated significantly lower than controls on desirability as play partners (F (2,39) = 5.6, $p < .05$) and work partners (F (2,39) = 4.8, $p < .05$) as tested by one-way analyses of variance and Newman Keuls comparisons at $p = .05$. As the play and work sociometric ratings were highly correlated (Pearson $r = .91$, $p < .001$), only the play ratings were used in subsequent analyses.

Analysis of vocabulary scores also yielded significant group differences (F (2,57) = 11.1, $p < .001$), with the LD subjects scoring significantly below the other two groups (Newman Keuls test, $p = .05$). Pearson product-moment correlations were insignificant between vocabulary and sociometric scores ($r = .05$, ns). To control for differences in verbal skill, vocabulary scores were used as a covariate in analyses of the interview data.

One-way analyses of covariance were conducted on the mean skill ratings students received for first, alternate, and best strategies for dealing with each situation. Separate analyses were performed on the assertion and aggression situations. Where significant group effects were found, they were examined by Newman Keuls comparisons among groups at $p = .05$.

Results of the peer ratings indicated that groups did not differ in the scores assigned to their first response or best strategy for either type of

situation. However, analysis of alternate solutions to assertion situations yielded an effect for groups (F (2,56) = 3.54, $p < .05$), with the LD subjects earning significantly lower scores than the controls. The behavior problem group was not significantly different from the other two. This measure was not correlated with vocabulary scores (Pearson r = .01, ns).

Ratings of alternate solutions to aggression situations also differed among groups (F (2,56) = 3.20, $p < .05$). Behavior problem students received significantly lower skill ratings than controls, while the LD group was not significantly different from the others. This measure was also uncorrelated with the vocabulary scale (Pearson r = .03, ns).

Results based on the adult skill ratings yielded essentially parallel findings. Again, no group differences were found in the scores given to first or best solutions. Groups differed on alternates proposed to assertion situations (F (2,56) = 3.22, $p < .05$) with the LD group receiving the lowest scores followed by the behavior problem group and the controls. Group comparisons did not quite reach significance on Newman Keuls test. The alternate solutions to aggression-related scenarios differed significantly (F (2,56) = 3.18, $p < .05$). Again this was due to the behavior problem subjects receiving significantly lower scores than controls, with the LD group falling between. There were no significant Pearson correlations between the vocabulary scores and the adult ratings of alternate solutions to assertion (r = .02, ns) or aggression (r = .01, ns) situations.

As the number of behavior problem subjects for whom sociometric data were available was quite small, the relationship between the interview skill

ratings and sociometric status was examined for the LD and control groups only. Significant Pearson product-moment correlations were found between the sociometric scores and the peer ratings given the first response (r = .32, $p < .05$) and the alternate solution (r = .35, $p < .05$) to assertion situations, as well as the adult ratings of these same alternate solutions (r = .34, $p < .05$). No significant correlations between sociometric status and the other interview measures were found.

Discussion

Results of this study replicated the previously reported finding that LD students are significantly less socially accepted by mainstream peers than controls (Gresham, 1981), and add to the evidence that this group may be at risk for problems in social adjustment (Bryan, 1978).

Differences among groups were not found in the quality of their most likely responses nor their knowledge of appropriate behavior in social problem situations. The LD subjects received lower skill ratings than controls for their alternate solutions to assertion situations, while the behavior problem students had similar difficulties with aggression situations. As generation of alternative strategies is considered an important aspect of social problem-solving (Spivak, Platt, & Shure, 1976), these results are consistent with deficits in this skill. Recent studies of other groups of children with social adjustment problems reported similar findings. Richard and Dodge (1982) found that popular, isolated, and aggressive elementary school boys gave initial solutions to social problems which were generally

rated as equally effective. Alternate strategies generated by the popular subjects continued to be rated as effective, while those proposed by the isolated and aggressive students were more likely to be rated as aggressive or ineffective. Bryan, Sonnefeld and Greenburg (1981) found that LD children chose social responses of lower quality than controls on a test of cognitive social skills. This measure was uncorrelated with IQ scores, but moderately correlated with sociometric status and teacher preference ratings.

Thus there appears to be evidence that problems in social adjustment may be accompanied by deficits in social problem-solving skills for various groups of children, including the learning disabled, and that such deficits may be significantly related to peer acceptance. Results of the present study suggest that these deficits may be situation-specific, and appear not to be simply a function of verbal intelligence. Difficulties in social problem-solving may or may not relate to the cognitive deficits associated with learning disabilities, especially in light of finding similar problems in the behavior problem group. Also, it should not be assumed that the factors responsible for the poorer performance of these two groups relative to controls are the same. From examining the specific responses of subjects, it appears that the behavior problem boys received lower scores because they quickly resorted to aggression as an alternate response. No such pattern was noted in the LD group.

Conclusions based on the data presented here must be considered preliminary given that the interview measure has not been standardized, and that its reliability and validity are undetermined. The scoring system

applied to the interview did make use of ratings obtained from a sample of both adults and students, thus providing a form of social validation (Kazdin, 1977) for this system. Thus results may have greater validity than if based only on face valid, experimenter-determined standards.

It must be considered that the verbal nature of the task may have placed more demands on LD than other subjects, despite efforts to insure adequate attention and comprehension on the part of all. If this were the case, however, it is unclear why these subjects should have shown deficits on one type of situation and not another. The interpretation of these data is also necessarily limited by the demographic characteristics of this primarily white, middle-class sample of boys. Similar results may not be found for females, or children of other age levels, ethnic or socio-economic backgrounds.

It appears that further research into the social cognitive skills, including problem-solving, of LD children is warranted. The relationship of cognitive social skills to overt social behavior and peer acceptance should be investigated. The influence of other factors (such as age, sex, and socioeconomic status) on social adjustment and skills needs to be assessed as well.

The results of this study suggest that junior high age LD students are not in need of training that is primarily informational in nature; rather it appears that skill training should emphasize generation of alternate solutions, i.e. what options are available when initial efforts at problem-solving fail.

A number of reports have indicated that training in social problem-solving has resulted in improved social adjustment (Gesten, Flores de Apodoca, Rains, Weissberg & Cowen, 1979; Spivak, Platt & Shure, 1976). It remains to be determined if such training could help remediate problems in the social adjustment of LD children or enhance the outcome of mainstreaming.

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Table 1

Group Means and Standard Deviations of

Sociometric Ratings, Vocabulary and Interview Scores

	Groups		
	Learning Disabled	Behavior Problem	Control
Sociometric Ratings			
Play	2.56(.68)	2.20(.62)	3.19(.71)
Work	2.55(.64)	1.99(.43)	3.04(.76)
WISC-R			
Vocabulary Scale	8.36(1.49)	10.11(1.87)	10.85(1.89)
Interview			
Peer Ratings - Assertion			
First	3.53(.29)	3.75(.49)	3.71(.44)
Alternate	2.90(.43)	3.01(.54)	3.31(.53)
Best	3.45(.27)	3.64(.31)	3.60(.36)
Peer Ratings - Aggression			
First	3.45(.39)	3.27(.54)	3.36(.44)
Alternate	3.01(.51)	2.71(.55)	3.09(.40)
Best	3.33(.40)	3.28(.27)	3.47(.26)
Adult Ratings - Assertion			
First	3.43(.31)	3.75(.60)	3.64(.62)
Alternate	2 71(.54)	2.78(.67)	3.16(.63)
Best	3.36(.32)	3.58(.47)	3.59(.55)
Adult Ratings - Aggression			
First	3.10(.55)	3.14(.82)	3.24(.58)
Alternate	2.75(.68)	2.36(.65)	2.88(.64)
Best	3.26(.39)	3.26(.42)	3.50(.31)

The authors wish to acknowledge the cooperation and support of the Issaquah School District, Issaquah, Washington. This research was conducted while the first author was a research affiliate of the Child Development and Mental Retardation Center, University of Washington. The sponsorship of Dr. Joseph Jenkins and Dr. Matthew Speltz is gratefully acknowledged. Reprints can be obtained from the first author who is now at the Department of Psychiatry and Behavioral Sciences, RP-10 University of Washington, Seattle, WA 98195.